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# The Role of Organizational Change in Health System and Payment Reform

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# Muskie School of Public Service

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## Overview

The Maine Health Access Foundation (MeHAF) has awarded grants to 14 Maine health organizations to date to mitigate the increasing cost of health care in Maine through innovative delivery system and payment reform strategies that preserve access, improve quality, and offer better value. As part of the evaluation of this initiative, the University of Southern Maine Muskie School of Public Service (Muskie School) is producing a series of issue briefs that capture common themes and challenges across grantees in achieving payment reform and health system delivery change to assess lessons learned. This is the first issue brief which describes our evaluation approach and presents an analysis of the role of organizational change among grantees engaged in delivery system and payment reform

## Evaluation Approach

The grantees in MeHAF's Payment Reform Initiative represent a wide variety of organizations that have addressed cost containment and payment reform using very different approaches. The unifying theme across grantees is that they all seek to fundamentally change the organizations or systems in which they operate in order to improve value and outcomes. Because of the diverse aims and design of the project, our evaluation goal is to provide MeHAF with a broad-based "program assessment" that addresses the following core questions:
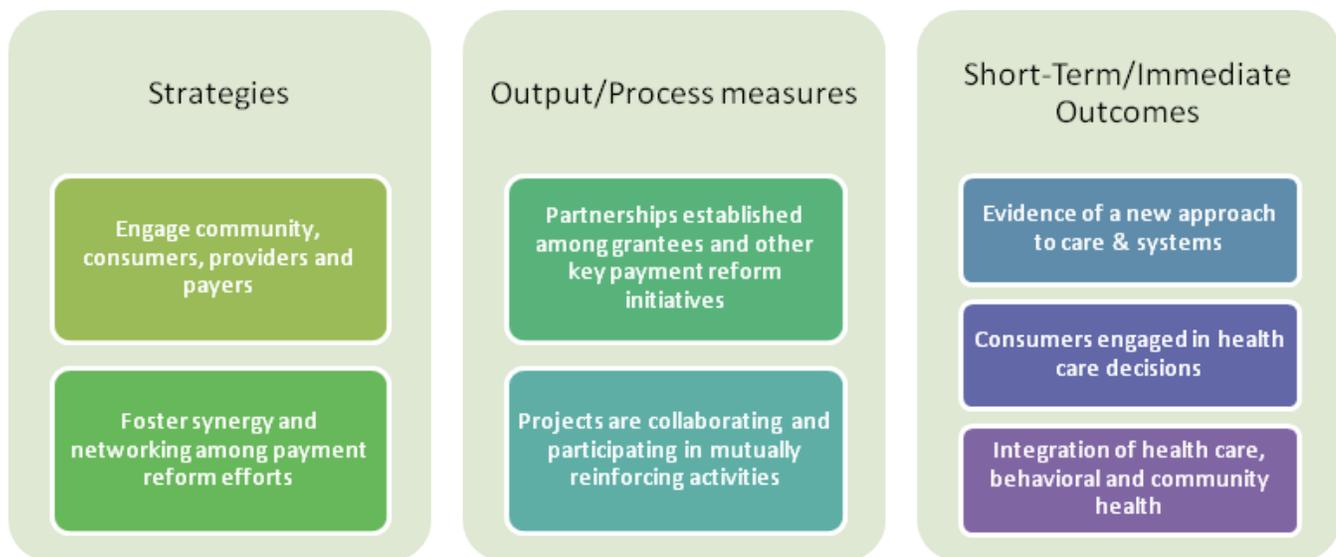
1. How are the strategies and activities of these projects targeting and achieving measurable healthcare cost containment?

2. Have the projects had an impact statewide, regionally, or locally?

3. How is the MeHAF initiative preparing stakeholders (e.g., health systems, providers, consumers and other organizations) to meet the new payment and delivery system reforms projected in the ACA?

4. What barriers and opportunities have the projects encountered?

5. How have barriers and opportunities been addressed, and what are the lessons for others?

6. How have the needs of uninsured and medically underserved people been addressed by each project? Are there specific lessons about how best to include these populations in payment reform efforts?

7. Is there synergy between and among projects? How are projects changed or augmented by coordination with the other grantees' work?

8. Based on the lessons from these projects, how could the effectiveness and impact of this initiative be enhanced?

To answer these broader health system questions and capture the rapid change results, we developed a strategy to identify and analyze key issues and themes common to the collective grantee experience. By utilizing the lens of a common issue (organizational change) the initial stage of evaluation focused on specific indicators of success, as well as barriers to progress, and the resources grantees need to move forward with reform—both individually and collectively.

The grantees represented in this issue brief are Quality Counts (QC), MaineGeneral (MG), Prescription Policy Choices (PPC), Maine Health Management Coalition (MGMC), Medical Care Development Public Health (MCDPH), Health InfoNet (HIN), Maine Department of Health and Human Services (DHHS), and Maine Community Health Options (MCHO).[1] Five of the projects (MG, QC, MHMC, MCD, PPC) were members of the first cohort of MeHAF funding from 2010-2012; all five have recently received continued funding by MeHAF through 2013. The remaining three grantees (HIN, DHHS, MCHO) are part of a second funding cycle in 2011-2013. Based on discussions with these grantees, we chose to examine a set of issues related to "organizational change." Through a survey, grantees shared their lessons, barriers, and challenges around this issue. This issue brief analyzes grantee responses, highlights grantee experiences and centers the MeHAF project in the broader context of the literature on organizational transformation in healthcare.

## Alignment with the MeHAF logic model

We reviewed how grantees' experiences with organizational change aligned with the intended strategies, process measures and short-term outcomes outlined in the MeHAF initiative logic model (Attachment 1). The eight grantees are moving forward with a number of similar strategies encouraged by MeHAF. Survey results indicate that all grantees are engaging communities, consumers, providers and payers, and cited each other as key partners. As an early measure, formal and informal partnerships have been established among grantees, and projects are collaborating and reinforcing each others' work. Short term outcomes include evidence of a new approach to care and systems by all grantees, initial signs of consumer engagement in health care decisions (MG, MCD), and the beginnings of integrated health care with behavioral



| Strategies | Output/Process measures | Short-Term/Immediate Outcomes |
|---|---|---|
| Engage community, consumers, providers and payers | Partnerships established among grantees and other key payment reform initiatives | Evidence of a new approach to care & systems |
| Foster synergy and networking among payment reform efforts | Projects are collaborating and participating in mutually reinforcing activities | Consumers engaged in health care decisions |
| | | Integration of health care, behavioral and community health |

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1. *MeHAF announced funding for six new grantees for the two year period January 2013-December 2014. This new cohort was not included in the survey process but participated in the February learning session.*

and community health (MG, DHHS, QC, MCD). In the survey, grantees suggested or confirmed that partnerships were increasing transparency and decreasing duplication of services (MHMC).

Grantees have embraced other key strategies such as 1) building a data infrastructure to support decision making and care coordination (HIN), 2) piloting new insurance models and benefit design (MCHO, DHHS), 3) testing the feasibility and design structures for new payment models such as ACOs (MHMC), and 4) redesigning the delivery system to emphasize prevention, primary care, and integrated behavioral health and community-based resources (MCD, QC, MG). All grantees are directly or indirectly targeting uninsured and underinsured populations (a MeHAF priority). Progress in advancing the strategies can be measured within each project. As of yet, outcomes are harder to pinpoint.

## Organizational Change

To engage grantees in a meaningful evaluation process, evaluators asked them to identify a common theme with significant relevance to their ongoing efforts. Grantees selected organizational change as the first theme for evaluation purposes in November 2012. The grantees then identified the subtopics of **governance**, **alliances and partnerships**, **sustainability**, and **patient-centeredness** as the focus of the discussion of organizational change.



## Survey Method

The Muskie School distributed a thirteen-question online survey to the eight MeHAF-funded payment reform projects in November and December 2012. (Attachment 3). Nine project leaders responded (QC provided two responses). Survey findings are as follows:

## I. Governance

The survey sought to illuminate changes that grantees are initiating or experiencing in organizational structure, policies, and other components of governance. We were curious about the involvement of the organizational leaders, including governing boards, in initiating and guiding the implementation of the

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project. The survey asked how changes in governance, which could include creation of new committees and/or by-laws changes, have influenced project design and implementation. The evaluation team also sought to answer a much broader question: what can governance structure and style tell us about organizational culture and its receptivity to change?

Of the eight respondents, four cited notable structural or policy changes in their organization, ranging from new strategies, such as QC's new role in processing Community Care Team (CCT) payments from payers and MG's establishment of patient councils at physician practices. To enhance collaboration, communication, and shared expertise across departments, the DHHS has used a monthly Design Management Committee which convenes leadership across departments within DHHS to review and comment on the state's Value Based Purchasing initiative. In the case of MCHO, the Patient Protection and Affordable Care Act (2011) codifies their governance plan in terms of models of consumer engagement.

Several respondents identified ways in which new organizational structures had increased the patient focus. The patient advisors in the MG project are included in a variety of workgroups and have begun to attend hospital Board of Director strategic planning retreats. (See Case Example below.) For DHHS, the Design Management Team provides input from across patient populations (long term care, children, mental health and substance abuse). The forum has played a major role in design of the project. Several grantees identified changes in developing a more patient centered mission (PPC) and noted the challenge of certain technology barriers to greater patient access (meaningful use policies for HIN).

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### Case Example: Governance and MaineGeneral's Patient Advisory Councils

At MaineGeneral (MG), "governance" encompasses the structure of the organization as well as its policies. Changes in governance were a key part of implementing the MG project. In a concerted move towards greater "patient centeredness," MG created Patient Advisory Councils (PACs) for each medical practice to actively involve patients in decision-making processes. Their "patient advisors" are included in activities, workgroups, strategic planning retreats of their Board of Directors. Each PAC developed bylaws adopted by the practice.

Giving a voice to patients within each practice has involved changes in governance on both the practice and system level. For example, "patient and family" are now listed as part of the health team in MG's value statement. Advisors helped MG to improve signage so that patients know where to go in the hospital. MG has also learned that educating patient advisors, developing trust, and saying thank you in a visible way are all vital components of success.

"Patients are our safety net," said Joan Orr, Project and Operations Manager for MaineGeneral physician practices. "Having staff understand that patients need to lead the work is important."

"Talk about a change from a paternalistic culture towards shared decision. We're not there yet, but we are not going to go back because patients have been such powerful voices," said Barbara Crowley, MD, Executive Vice President, MaineGeneral.

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## II. Alliances and Partnership

The set of questions around alliances and partnership underscores the importance of collaboration, synergy and integration of internal and external stakeholders as key to health system reform. The evaluation team was interested in finding out more about the process of planning and selecting partnerships, and any lessons grantees learned from unexpected relationships that have emerged.

Alliances and partnerships play a key role in all projects. Each grantee was able to cite two or three close partnerships. Seven of the eight organizations cited other MeHAF payment reform project grantees as partners. Partners served as convenors, collaborators, and advisors, and provided expertise and access to target populations and communities. Maine Health Management Coalition (MHMC) noted that a partner (QC) ensures continuity and ensures that efforts are not duplicative statewide.

> ### Case Example : Partnership between Quality Counts (QC) and DHHS
>
> DHHS notes that the Value Based Purchasing (VBP) project has solidified and formalized its longstanding partnership with QC. QC's work with the Patient Centered Medical Home pilot has provided foundation for MaineCare' Health Homes and critical infrastructure for VBP. The expansion of PCMH and Health Homes sites throughout Maine has depended on a close collaboration between QC and DHHS, a good example of a public-private partnership.
>
> Lisa Letourneau, MD, MPH, Executive Director of QC, noted the challenges of working with state government bureaucracy but emphasized that the QC partnership with DHHS works because of the organizations' shared mission. "our partnership makes sense..and it is based on a strong relationship. That trust allows for a willingness to make a commitment in the face of uncertainty." The governance structure of QC reinforces the importance of this partnership by including three DHHS members on the QC Board.
>
> Letourneau observed, "We could have had Health Homes (DHHS) not related to multipayer (QC's Patient Centered Medical Home), but it was Michelle Probert's leadership in the state (DHHS) to do it here even though it's more difficult. It took a lot of conversations with CMS, and the ability to see past those challenges because of common shared goals."

The partnership between DHHS and QC allows MaineCare to use the infrastructure of the Patient Centered Medical Home (PCMH) Pilot for its Value Based Purchasing (VBP) initiative. Key internal partnerships within the state agency are also supporting the VBP initiative. MCD partners with Greater Somerset Public Health to implement the worksite wellness project.

The grantees all said that the funded projects extended and/or strengthened existing partnerships. MCD noted that the project served to formalize a partnership with two others groups they had been meeting with for several years, underscoring the fact that partnership development takes time and planning. PPC stated that their alliance with Care Partners was the result of MeHAF staff encouraging them to work more closely together.

Some unanticipated partnerships have provided important funding opportunities. QC explained how a partner that emerged as part of the project (Area Agencies on Aging (AAA)) received a grant to provide additional services to the CCTs "in hopes of developing a sustainable model for local contracting." MCD

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gained a new partnership with Maine Development Foundation to replicate their project through new grant funding. Such synergistic alliances have provided opportunities to extend programmatic efforts. MCHO's partnerships are providing significant value to the new insurance plan as it designs benefits packages, and develops a plan to engage small businesses and individuals.

> ### Case Example: Sustainability and Community Building - MCD
>
> MCD-Somerset Worksite Wellness has encountered numerous challenges, from changes in Maine insurance law to loss of state funding for its chief partner Somerset Healthy Maine Partnership. The project has deep local community roots, building on relationships among health organizations, public health, and the business community in the Skowhegan area to create worksite wellness benefits for microbusinesses. The project director defines sustainability as "the result of a mission aligned with community aspirations, so that pursuing it strengthens the bonds of the community."
>
> Bill Primmerman, Director of Somerset Healthy Maine Partnership and the Worksite Wellness pilot, outlines an approach to public health that is community oriented: "I define public health as what communities/people need to lead a healthy life...As we've gone forward with the worksite piece, the resources that we've been able to add have allowed us to learn more about what we have as a community." Bill described employers getting farm market shares for worksites, businesses putting up smoke detectors, working on second hand smoke. "People are realizing that my worksite has a role in my health and well being."
>
> MCD's new partnership with Maine Development Foundation to replicate the Skowhegan experience statewide shows that the project is now part of downtown development, according to Kala Ladenheim, MCD project manager. "Part of the vitality of downtown is the vitality of our health and well being. You become sustainable when the public recognizes that what health does helps them go on doing what they are already doing."

## III. Sustainability

Grantees defined sustainability in a variety of ways. While financial sustainability is a key concern for most grantees, several grantees described sustainability as growing their organizations, by gaining recognition and credibility (PPC), developing ongoing structure, expanding roles of advisors (MG), by members integrating the priorities into their ongoing work (MHMC), and by integrating VBP into MaineCare (DHHS).

HIN described the complexity of sustainability for the Health Information Exchange and outlined their business model that includes ancillary services to support the exchange. As a future payer, MCHO views sustainability as a function of member retention, investments in methods and modes of care that improve health status, and investments in data, education and outreach that result in better use of health care resources. In identifying the most important factors contributing to the sustainability of reform efforts, respondents ranked "payment reform" as most important, followed by "accountability measures," "focus on most vulnerable patients" and "focus on population health."All respondents "frequently" consider how their project could be scaled up if successful.

## IV. Shift to Population Focus

When asked about organizational changes to shift focus from serving individual patients who actively seek care to improving care for an entire population, the grantees said that "developing tools to look at performance across whole patient populations" was most important. "Educating providers about the need for population health management" was ranked second in importance. Issues of patient self management,

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a focus on health behavior, changing service delivery models and using Health Information Technology (HIT) were weighted equally in rank (Attachment 3).

> ### *Tools of Population Health Management*
>
> Grantees are employing a variety of tools and methods to develop population health management in their projects. MG holds bi-monthly meetings with practices to review a set of overall population health reports from claims data and are discussing cross-system protocols for select populations. QC has developed a statewide risk stratification and patient identification plan for all the CCTs to use While QC identifies the target population, the CCTs are allowed to select their own tools to identify patient. The Vermont Access Database is available for tracking patients once they are admitted to the CCT. As part of the worksite wellness project, MCD conducts environmental scans of worksites and offers recommendations to improve the health of the business environment. HIN's project, implementing a data warehouse, involves tools for population-based reporting and analytics based on clinical and encounter data. The range of reporting includes basic market share and patient origin numbers, inpatient clinical performance comparison, and predictive modeling for future clinical events.

Vulnerable populations are a primary target audience for all of the respondents, who cited different strategies to change organizational processes or structures to address their needs. Several grantees are expanding areas of service to focus on high-needs underserved patients (QC, PPC). MG is actively reaching out to this population via focus groups and surveys and efforts to include representatives at council meetings and activities. MCD said, "This project has shown the feasibility of addressing the problem of scale for small entities by grouping them together to address wellness needs of...employees and associated community members." Both HIN and MHMC noted the specific technology needs of providers serving vulnerable populations and shifting data collection and reporting priorities.

## V. What Have We Learned About Sucessful Organizational Change?

To provide a national context to grantees' organizational change experiences, the Muskie School has reviewed the literature of organizational change and transformation in health organizations. Most relevant to the MeHAF initiative are several studies that have identified organizational factors that contribute to successful patient care transformation across complex organizations (Attachment 4).

In their paper, "Transformational change in health care systems: An organizational model," Lukas et al., (2007) developed the conceptual model (below) to illustrate how organizations move from short term performance improvements to sustained organization-wide patient care improvements. Five interactive elements appear critical to successful patient care transformation (1) Impetus to transform; (2) Leadership commitment to quality; (3) Improvement initiatives that actively engage staff in meaningful problem solving; (4) Alignment to achieve consistency of organization goals with resource allocation and actions at all levels of the organization; and (5) Integration to bridge traditional intra-organizational boundaries among individual components. These elements drive change by affecting the components of the complex health care organization: 1) Mission, vision and strategies that set its direction and priorities; 2) Culture that reflects its informal values and norms; 3) Operational functions and processes that embody the work done in patient care; and 4) Infrastructure such as informational technology and resources that support the delivery of patient care.

Our common issue, organizational change, is reflected in the central component of the organization (large circle) as well as some of the interactive elements driving change.
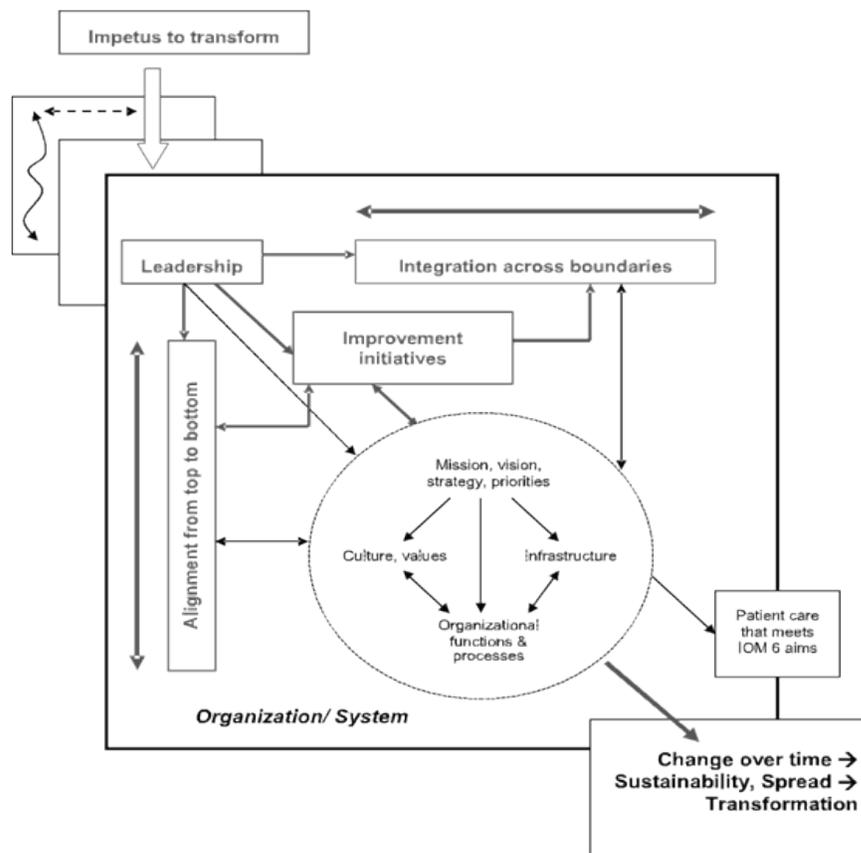
*Source:* Lukas et al., 2007

The team also identified an additional paper relevant to this set of projects. In their paper, "Large system transformation in health care" Best and colleagues (2012) analyze examples of successful and less successful transformation initiatives among large system transformation (LST).  LST is defined as an intervention aimed at coordinated, system-wide change affecting multiple organizations and providers with the goal of significant improvements in efficiency of health care delivery, quality of patient care and population level patient outcomes. Many MeHAF grantees are attempting LST type change.  The authors describe five "simple rules" that would apply across all LST programs, to be applied differently in different contexts:

**Rule 1:** Engage individuals at all levels in leading the change efforts. Leadership must be both designated and distributed.

**Rule 2:** Establish feedback loops. Develop careful identification of measures and judicious disclosures of those measures to those both inside and outside organization.

**Rule 3:** Attend to history. Educate leadership about previous change efforts and their outcomes; building on familiar and valued ideas and activities.

**Rule 4:** Engage physicians. Consider the alignment of professional and regulatory drivers.

**Rule 5:** Involve patients and families. Their involvement leads to heightened awareness by change agents of patients' perspectives and priorities; heightened sense of validity (metrics reflect patients' priorities); and heightened sense of equity.

The study highlights how these rules are carried out and the mechanisms by which they contribute to change.  We anticipate that further investigation of grantees' experience with organizational change will indicate whether our findings are consistent with the national research in this area or point to new results.

## Logic Model: MeHAF's Advancing Payment Reform Initiative

| Inputs | Strategies | Output/process measures | Short-term and intermediate outcomes | Long-term outcomes |
|---|---|---|---|---|
| MeHAF funds & technical assistance | Build data infrastructure to support informed decision making and care coordination | Completed feasibility plans for integrated, flexible data systems | ↑ Data availability | Improved consumer experience of care (including quality and satisfaction) |
| Grantees and collaborative partners | Engage community, consumers, providers, and payers | Functioning community/cross-sector education process | ↑ Awareness of health care cost drivers | |
| Community stakeholders | Pilot new insurance models and benefit design | Vetted model design(s) incorporating technical analysis & planning | ↑ Consumer, provider, payer awareness of their role in care decisions/health promotion | Improved health outcomes/ population health |
| Evaluation team | Test feasibility and design structure for new payment models (e.g., ACOs) | Additional funding to support new models | ↑ Awareness of new insurance options and payment models among consumers, providers & payers | Reduced system-wide & per capita cost of health care |
| External funding sources | Reframe/redesign delivery system to emphasize prevention, primary care, and integrated behavioral health and community-based resources | Multidisciplinary, integrated provider networks & care coordination functions defined/established | ↑ Integration of health care, behavioral and community health | Improved access to care and insurance for uninsured and underserved |
| State/federal healthcare policies | Target MeHAF priority populations (uninsured/underinsured) | Partnerships established among grantees and other key payment reform initiatives | ↑ Use of primary care and early intervention | |
| | Foster synergy and networking among payment reform efforts | Projects are collaborating and participating in mutually reinforcing activities | Evidence of a new approach to care & systems | |

Short-term and intermediate outcomes (continued):
- ↑ Use of data to inform decision making
- ↑ Transparency, ↓ duplication
- Consumers engaged in health care decisions and administration
- Improved health care choices and options
- Payers implement/coordinate new payment models
- Improved care coordination and chronic care management

↑ = increased  ↓ = decreased

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# Attachment 2. Organizational Change—MeHAF Evaluation Online Survey, Fall 2012

1. Did the creation of your project result in any structural or policy changes in your organization? For each change, please briefly describe:

    a. How your organization's leadership was involved in making changes
    b. How changes in government were codified
    c. How your board was involved

2. Have any of the above changes resulted in a more patient centered focus within your organization? If so, how? If not, why not?

3. Have there been any practical or tangible results of changes in governance—either for the project or the overall organization? What are they?

4. Describe 2-3 core alliances/partnerships and their relationship to your project. Please include both internal and external partnerships as applicable to your organization.

5. Was there a strategy or planning process for selecting partnerships? Please describe the process.

6. Are the partners/alliances for this project new, or are they based on existing relationships from previous or other work?

7. Have unexpected partnerships or alliances arisen since the beginning of the project? Please explain how they developed and their value to the project.

8. How do you define sustainability for your organization?

9. What factors will contribute to the sustainability of reform initiatives that your organization is leading. Please rank in order of importance.

    a. Health information technology solutions
    b. Health promotion
    c. Payment reform
    d. Accountability measures
    e. Focus on most vulnerable patients
    f. Focus on population health
    g. Environmental stewardship, or protection of natural resources
    h. Integrated provider networks
    i. Other

10. How often do you consider the issue of sustainability for your project?
    a. All of the time
    b. Frequently
    c. Some of the time
    d. Rarely

11. How often do you consider how your project could be "scaled up" if it is successful?
    a. Frequently
    b. Some of the time
    c. Rarely

12. What organizational changes have you made, if any, to shift from a focus on serving individual patients who actively seek care to improving care for an entire population? Please identify whether your project has employed any of the following approaches, and let us know if there are other ways you are shifting focus:
    a. Educating providers about the need for population health management
    b. Developing tools to look at performance across whole patient population and subgroups
    c. Tying rewards to improvements across populations served
    d. Changing service delivery model (e.g. multidisciplinary teams or coordination across care settings)
    e. Patient self-management education
    f. Focusing on health behavior and lifestyle changes
    g. Using HIT for data access and reporting for communication among providers and with patients
    h. Other

13. Has your project changed organizational processes or structures to address the needs of vulnerable populations (uninsured, medically underserved, high-risk chronically ill)? Please give some examples.

What organizational changes have you made, if any, to shift from a focus on serving individual patients who actively seek care to improving care for an entire population? Please identify whether your project has employed any of the following approaches, and let us know if there are other ways you are shifting focus:
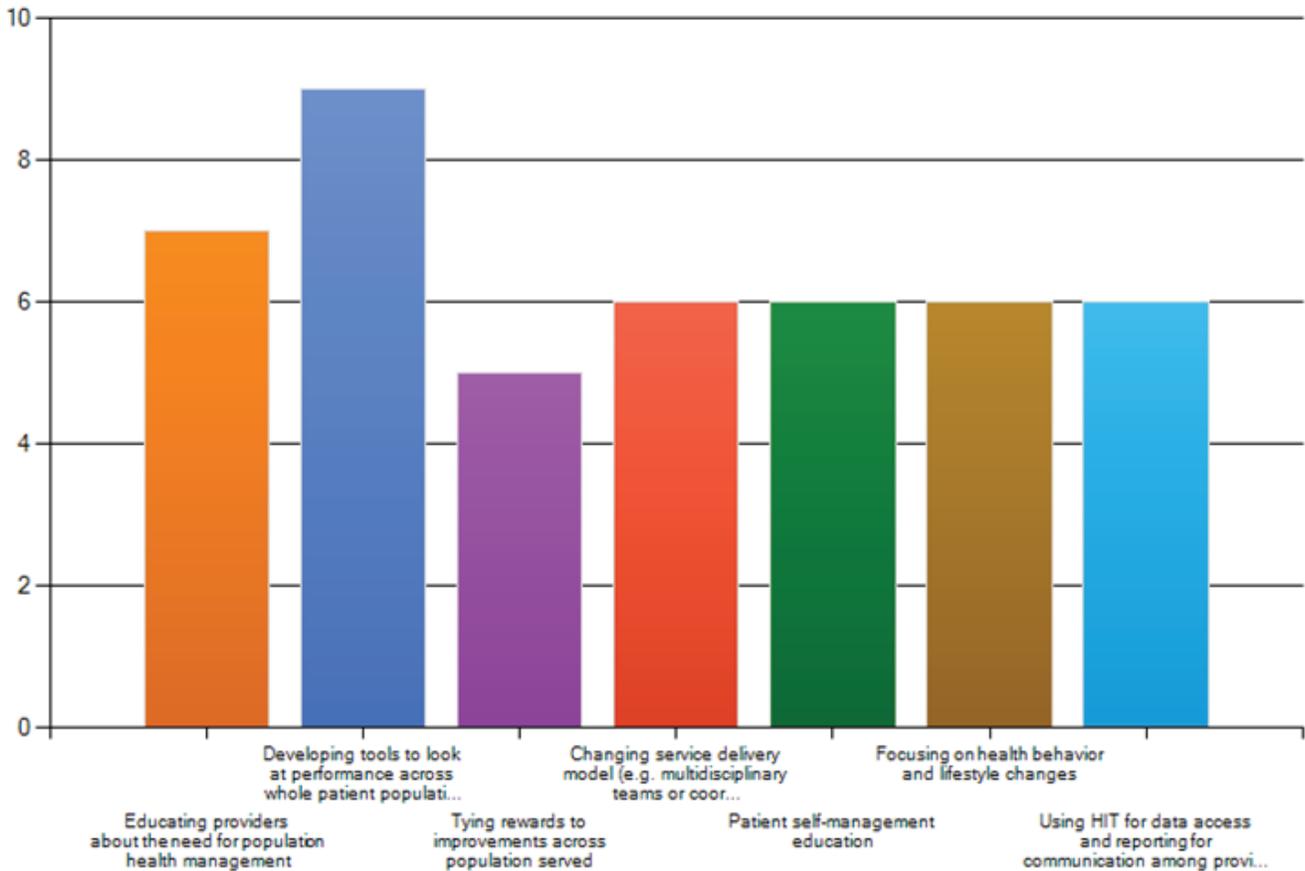
Aiken C, Keller S. The Inconvenient Truth About Change Management: Why it isn't Working and What to do About it. *The McKinsey Quarterly.* 2000; 1-17. http://www.mckinsey.com/App_Media/Reports/Financial_Services/The_Inconvenient_Truth_About_Change_Management.pdf
Most change programs fail, but the odds of success can be greatly improved by taking into account these counterintuitive insights about how employees interpret their environment and choose to act. This article is based on the report "The Inconvenient Truth of Change Management."

Aiken C, Keller S. The Irrational Side of Change Management. *The McKinsey Quarterly*. 2009;(2):101-109. http://www.mckinsey.com/insights/organization/the_irrational_side_of_change_management
Change-management thinking extols the virtues of creating a compelling change story, communicating it to employees, and following it up with ongoing communications and involvement. This is good advice, but in practice there are three pitfalls to achieving the desired impact.

Armenakis AA, Bernerth JB, Pitts JP, Walker HJ. Organizational Change Recipients' Beliefs Scale: Development of an Assessment Instrument. *J Appl Behav Sci*. 2007; 43(4):481-505. http://jab.sagepub.com/cgi/content/abstract/43/4/481
Based on research conducted by organizational scientists dating to the 1940s, the authors identified five important precursors that determine the degree of buy-in by organizational change recipients.

Ayers LR, Beyea SC, Godfrey MM, et al. Quality Improvement Learning Collaboratives. *Qual Manag Health Care*. 2005; 14(4):234-47. http://journals.lww.com/qmhcjournal/Abstract/2005/10000/Quality_Improvement_Learning_Collaboratives.10.aspx
The article identifies and synthesizes characteristics of successful data-driven quality improvement learning collaboratives (QILCs) in the United States and Europe, and extends previously discussed and newly identified guidelines for developing successful data-driven QILCs across health care settings and systems.

Bazzoli G, Dynan L, Burns L, Yap C. Two Decades of Organizational Change in Health Care: What Have we Learned? *Med Care Res Rev.* 2004; 61: 247. http://mcr.sagepub.com/content/61/3/247
This review examines studies of horizontal consolidation and integration of hospitals, horizontal consolidation and integration of physician organizations, and integration and relationship development between physicians and hospitals. In all, around 100 studies were examined to assess what was learned through two decades of research on organizational change in health care.

Best A, Greenhalgh T, Lewis S, et al. Large-System Transformation in Health Care: a Realist Review. *Milbank Q.* 2012; 90(3):421-456.  http://dx.doi.org/10.1111/j.1468-0009.2012.00670.x
Realist review methodology can be applied in combination with a complex system lens on published literature to produce a knowledge synthesis that informs a prospective change effort in large-system transformation. A collaborative process engaging both research producers and research users contributes to local applications of universal principles and mid-range theories, as well as to a more robust knowledge base for applied research.

Better Health Greater Cleveland, An Alliance for Improved Health Care. *Better Care, Lower Cost: It Takes A Community*. (Executive Summary, 10th Report). Winter 2013. http://www.rwjf.org/en/research-publications/find-rwjf-research/2013/01/better-care--better-health--lower-cost.html

Better Health Greater Cleveland, a program of the Robert Wood Johnson Foundation's Aligning Forces for Quality initiative, focuses on improving care by measuring and improving patient-centered primary care for its residents with chronic medical conditions. This report describes the care and outcomes of 137,600 unique patients at 55 practice sites of eight health systems receiving care from 614 providers, which include general internal medicine, family practice and medicine/pediatrics physicians and advanced practice nurses with prescribing privileges.

Centers for Disease Control and Prevention. Framework for Program Evaluation in Public Health. *MMWR*. 1999; 48(RR-11):1-58. http://www.cdc.gov/mmwr/pdf/rr/rr4811.pdf
The framework guides public health professionals in their use of program evaluation. It is a practical, non-prescriptive tool, designed to summarize and organize essential elements of program evaluation.

Chreim S, Williams BE, Janz L, Dastmalchian A. Change Agency in a Primary Health Care Context: the Case of Distributed Leadership. *Health Care Manage Rev*. 2010; 35(2):187-99. http://journals.lww.com/hcmrjournal/Abstract/2010/04000/Change_agency_in_a_primary_health_care_context_.9.aspx
The findings of the study point to the importance of the distributed change leadership model in contexts where legitimacy, authority, resources, and ability to influence complex change are dispersed across loci. Distributed leadership has both planned and emergent components and its success in bringing about change is associated with the social capital prevalent in the site.

Fixsen D, Panzano P, Naoom S, et al. *Measures of Implementation Components of the National Implementation Research Network Frameworks*. Chapel Hill, NC: National Implementation Research Network; September 2008. http://www.fpg.unc.edu/~nirn/
The article identifies a scale of eight core implementation components to assess implementation progress and test the hypothesized relationships among the components.

Green PL, Plsek PE. Coaching and Leadership for the Diffusion of Innovation in Health Care: A Different Type of Multi-Organization Improvement Collaborative. *Jt Comm J Qual Improv*. 2002; 28(2):55-71. http://www.ncbi.nlm.nih.gov/pubmed/11838297
Health care organizations have suffered a steady decrease in operating margins in recent years while facing increased competition and pressure to provide ever-higher levels of customer service, quality of care, and innovation in delivery methodologies. The ability to rapidly find and implement changes that will lead to strategic improvement is critical.

Greenhalgh T, Robert G, Macfarlane F, Bate P, Kyriakidou O. Diffusion of Innovations in Service Organizations: Systematic Review and Recommendations. *Milbank Q*. 2004; 82(4):581-629. http://www.ncbi.nlm.nih.gov/pubmed/15595944
This article summarizes an extensive literature review addressing the following question: How can we spread and sustain innovations in health service delivery and organization? It considers both content (defining and measuring the diffusion of innovation in organizations) and process (reviewing the literature in a systematic and reproducible way).

Grembowski D, Anderson ML, Conrad DA, et al. Evaluation of the Group Health Cooperative Access Initiative: Study Design Challenges in Estimating the Impact of a Large-Scale Organizational Transformation. *Qual Manag Health Care*. 2008; 17(4):292-303. http://www.ncbi.nlm.nih.gov/pubmed/19020399
The Institute of Medicine argues that poorly designed delivery systems are a major cause of low-quality care in the United States but does not present methods for evaluating whether its recommendations, when implemented by a health care organization, actually improve quality of care. The article describes how time-series study designs using individual-level longitudinal data can be applied to address methodological challenges in our evaluation of the impact of the Group Health Cooperative "Access Initiative."

Holt DT, Armenakis AA, Feild HS, Harris SG. Readiness for Organizational Change: The Systematic Development of a Scale. *J Appl Behav Sci*. 2007; 43(2):232-255.  http://jab.sagepub.com/cgi/content/abstract/43/2/232
Using a systematic item-development framework as a guide (i.e., item development, questionnaire administration, item reduction, scale evaluation, and replication), this article discusses the development and evaluation of an instrument that can be used to gauge readiness for organizational change at an individual level.

Kitson AL, Rycroft-Malone J, Harvey G, et al. Evaluating the Successful Implementation of Evidence into Practice Using the PARiHS Framework: Theoretical and Practical Challenges. *Implement Sci*. 2008; 3:1.
http://www.implementationscience.com/content/pdf/1748-5908-3-1.pdf
The paper concludes by suggesting that the future direction of the work on the PARiHS framework is to develop a two-stage diagnostic and evaluative approach, where the intervention is shaped and molded by the information gathered about the specific situation and from participating stakeholders.

Kopach-Konrad R, Lawley M, Criswell M, et al. Applying Systems Engineering Principles in Improving Health Care Delivery. *J Gen Intern Med*. 2007; 22 Suppl 3:431-7.
http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2150611/
In this paper, authors describe systems engineering as the process of identifying the system of interest, choosing appropriate performance measures, selecting the best modeling tool, studying model properties and behavior under a variety of scenarios, and making design and operational decisions for implementation.

Lukas CV, Holmes SK, Cohen AB, et al. Transformational Change in Health Care Systems: an Organizational Model. *Health Care Manage Rev*. 2007; 32(4):309-20. http://www.ncbi.nlm.nih.gov/pubmed/18075440
Authors discuss five interactive elements critical to successful transformation of patient care: (1) Impetus to transform; (2) Leadership commitment to quality; (3) Improvement initiatives that actively engage staff in meaningful problem solving; (4) Alignment to achieve consistency of organization goals with resource allocation and actions at all levels of the organization; and (5) Integration to bridge traditional intra-organizational boundaries among individual components.

McHugh M, Joshi M. Improving Evaluations of Value-Based Purchasing Programs. *Health Serv Res*. 2010.
http://onlinelibrary.wiley.com/doi/10.1111/j.1475-6773.2010.01147.x/pdf
Although value-based purchasing (VBP) holds promise for encouraging quality improvement and addressing rising costs, currently there is limited evidence about how best to structure and implement VBP programs. In this commentary, the authors highlight several issues for improving evaluations of VBP programs.

Mowbray CT, Holter MC, Teague GB, Bybee D. Fidelity Criteria: Development, Measurement, and Validation. *Am J Eval*. 2003; 24(3):315-340. doi: 10.1177/109821400302400303.
http://aje.sagepub.com/content/24/3/315.abstract
Fidelity may be defined as the extent to which delivery of an intervention adheres to the protocol or program model originally developed. The purpose of this review article is to outline steps in the development, measurement, and validation of fidelity criteria, providing examples from health and education literatures.

Nembhard IM. Learning and Improving in Quality Improvement Collaboratives: Which Collaborative Features Do Participants Value Most? *Health Serv Res*. 2009; 44(2 Pt 1):359-78.
http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2677044/
Findings identify features of collaborative design and implementation that participants view as most helpful and highlight the importance of interorganizational features, at least for those organizations that most improve.

Plsek PE, Greenhalgh T. Complexity Science: The Challenge of Complexity in Health Care. *BMJ*. 2001; 323(7313):625-8. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1121189/
Clinical practice, organization, information management, research, education, and professional development are interdependent and built around multiple self adjusting and interacting systems. New conceptual frameworks that incorporate a dynamic, emergent, creative, and intuitive view of the world must replace traditional "reduce and resolve" approaches to clinical care and service organization.

Plsek PE, Wilson T. Complexity, Leadership, and Management in Healthcare Organisations. *BMJ*. 2001; 323(7315):746-9. doi: 10.1136/bmj.323.7315.746 http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1121291/
Management thinking has viewed the organization as a machine and believed that considering parts in isolation, specifying changes in detail, battling resistance to change, and reducing variation will lead to better performance. In contrast, complexity thinking suggests that relationships between parts are more important than the parts themselves, that minimum specifications yield more creativity than detailed plans.

Reinertsen JL, Bisognano M, Pugh MD. *Seven Leadership Leverage Points for Organization-Level Improvement in Health Care*. (IHI Innovation Series white paper no. 6). Cambridge, MA: Institute for Healthcare Improvement; 2008. http://www.ihi.org/knowledge/pages/ihiwhitepapers/sevenleadershipleveragepointswhitepaper.aspx
The article reviews the organizational framework and related implementation interventions used to achieve contextual change resulted in engaged investigators and enhanced uptake of research knowledge. QUERI's approach and progress provide working hypotheses for others pursuing similar system-wide efforts to routinely achieve evidence-based care.

Shortell S. Increasing Value: A Research Agenda for Addressing the Managerial and Organizational Challenges Facing Health Care Delivery in the United States. *Med Care Res Rev*. 2004; 61: 12S.
http://mcr.sagepub.com/content/61/3_suppl/12S.abstract
There is growing consensus that the U.S. health care system is not producing value relative to the resources invested. Unwarranted variation exists in quality and outcomes of care and underutilization of both evidence-based medicine and evidence-management practices. To address these issues, this article calls for a broad-based social science approach focused on obtaining a greater understanding of change at the individual, group, organizational, and environmental levels as they influence each other.

Stetler CB, McQueen L, Demakis J, Mittman BS. An Organizational Framework and Strategic Implementation for System-Level Change to Enhance Research-Based Practice: QUERI Series. *Implement Sci*. 2008; 3:30.
http://www.implementationscience.com/content/3/1/30
The Quality Enhancement Research Initiative (QUERI) was created to generate research-driven initiatives that directly enhance health care quality within the VA and, simultaneously, contribute to the field of implementation science. This paradigm-shifting effort provided a natural laboratory for exploring organizational change processes. This article describes the underlying change framework and implementation strategy used to operationalize QUERI.

Vest J, Gamm LD. A Critical Review of the Research Literature on Six Sigma, Lean and StuderGroup's Hardwiring Excellence in the United States: the Need to Demonstrate and Communicate the Effectiveness of Transformation Strategies in Healthcare. *Implement Sci*. 2009; 4(online):35.
http://www.implementationscience.com/content/4/1/35/abstract
U.S. healthcare organizations are confronted with numerous and varied transformational strategies promising improvements along all dimensions of quality and performance. This article examines the peer-reviewed literature from the U.S. for evidence of effectiveness among three current popular transformational strategies: Six Sigma, Lean/Toyota Production System, and Studer's Hardwiring Excellence.

Wilson MG, Lavis JN, Travers Robb, Rourke SB. Community-Based Knowledge Transfer and Exchange: Helping Community-Based Organizations Link Research to Action. *Implement Sci*. 2010; 5(33). http://www.implementationscience.com/content/5/1/33

The authors find that CBR is particularly effective at fostering a climate for using research evidence and producing research evidence relevant to CBOs through community participation. However, CBOs are not always as engaged in activities to link research evidence to action on a larger scale or to evaluate these efforts.